

***FlyBy Math™* Alignment**  
**Idaho Achievement Standards**  
**Mathematics 2-1-06**

**Standard 1: Number and Operation**

**Goal 1.1: Understand and use numbers.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.1.1.6</b> Recognize pertinent information for problem-solving. (338.01.b)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

**Goal 1.2: Perform computations accurately**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.1.2.6</b> Use a variety of strategies including common mathematical formulas to compute problems drawn from real-life situations. (338.01.a)	--Use tables, graphs, and equations to solve aircraft conflict problems.  --Use the distance-rate-time formula to predict and analyze aircraft conflicts.

**Goal 1.3: Estimate and judge reasonableness of results.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.1.3.1</b> Estimate to predict computation results. (337.03 a)	--Predict outcomes and explain results of mathematical models and experiments.

**Standard 2: Concepts and Principles of Measurement**

**Goal 2.1: Understand and use customary and metric measurements.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.2.1.1</b> Select and use appropriate units and tools to make formal measurements in both systems. (339.01.a)	--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.
<b>8.M.2.1.2</b> Apply estimation of measurement to real-world and content problems using standard measuring devices. (339.01.b)	--Predict outcomes and explain results of mathematical models and experiments.  --Compare predictions, calculations, and experimental evidence for several aircraft conflict problems.
<b>8.M.2.1.5</b> Convert units of measurement within each system in problem solving situations. (339.01.c)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.  --Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.

**Goal 2.2: Apply the concepts of rates, ratios, and proportions.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.2.2.1</b> Use rates, proportions, ratios, and scales in problem solving situations. (339.03.a)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.  --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.
<b>8.M.2.2.2</b> Determine unit rates in real-world situations.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

**Standard 3: Concepts and Language of Algebra and Functions****Goal 3.3: Solve algebraic equations and inequalities.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.3.3.2</b> Match graphical representations with simple linear equations. (340.03.b)	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.

**Goal 3.4: Understand the concept of functions.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.3.4.2</b> Use relationships to explain how a change in one quantity may result in a change in another, and identify the relationship as a positive, negative, or neither. (343.01.b)	--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.  --Interpret the slope of a line in the context of a distance-rate-time problem.

**Goal 3.5: Represent equations, inequalities and functions in a variety of formats.**

<b>8.M.3.5.1</b> Represent a set of data in a table, as a graph, and as a mathematical relationship. (343.02.a)	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
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**Goal 3.6: Apply functions to a variety of problems.**

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.3.6.1</b> Use patterns and linear functions to represent and solve problems. (343.03 a)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.  --Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.

## Standard 4: Concepts and Principles of Geometry

### Goal 4.3: Apply graphing in two dimensions.

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.4.3.1</b> Identify and plot points on a coordinate plane. (341.03.a)	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

## Standard 5: Data Analysis, Probability, and Statistics

### Goal 5.1: Understand data analysis.

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.5.1.1</b> Analyze and interpret tables, charts and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. (342.01.a)	--Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.  --Use tables, bar graphs, line graphs, equations, and a Cartesian coordinate system to draw conclusions.
<b>8.M.5.1.2</b> Explain and justify conclusions drawn from tables, charts, and graphs. (342.01.b)	--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.

### Goal 5.2: Collect, organize, and display data.

Objective(s)	<i>FlyBy Math™</i> Activities
<b>8.M.5.2.1</b> Collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, broken line graphs, line plots, bar graphs, histograms, and stem-and-leaf plots. (342.02.a)	--Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.  --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.